Filing Date: March 10, 2000
Title: METHOD OF VACCINATION

IN THE CLAIMS

Please amend the claims as follows:

- 1. (Cancelled).
- 2. (Previously Presented) A method of presenting an antigenic peptide on the surface of a viable cancer cell, said method comprising:

contacting said cancer cell with said antigenic peptide and with a photosensitizing agent, wherein said peptide and said agent are each taken up into an intracellular membrane-restricted compartment of said cell;

irradiating said cell with light of a wavelength effective to activate the photosensitizing agent, such that the membrane of said intracellular compartment is disrupted, releasing said peptide into the cytosol of the cell, without killing the cell;

wherein, said released antigenic peptide, or a part thereof of sufficient size to stimulate a cytotoxic T cell response, is subsequently presented on the surface of said cell by a class I MHC molecule;

wherein presentation of the antigenic peptide, or part thereof, on the surface of said cell results in cytotoxic T cell mediated cell killing by a cytotoxic T cell specific for said antigenic peptide or a part thereof; and

wherein the photosensitizing agent is selected from the group consisting of a porphyrin, phthalocyanine and a chlorin.

- 3. (Cancelled).
- 4. (Previously Presented) The method of claim 2, wherein the antigenic peptide is a vaccine antigen or vaccine component.
- 5-7. (Cancelled).

Title: METHOD OF VACCINATION

- (Previously Presented) The method of claim 2 wherein the photosensitizing agent is 8. meso-tetraphenylporphine with 4 sulfonate groups (TPPS4), meso-tetraphenylporphine with 2 sulfonate groups on adjacent phenyl rings (TPPS2a), or aluminum phthalocyanine with 2 sulfonate groups on adjacent phenyl rings (AlPcS2a).
- (Previously Presented) The method of claim 2, wherein the antigenic peptide and/or 9. photosensitizing agent is bound to one or more targeting agents or carrier molecules.
- (Previously Presented) The method of claim 2, wherein said method is carried out in 10. vitro or in vivo.
- 11-23. (Cancelled).
- (Canceled) 24.
- (Canceled) 25.
- 26. (Canceled)
- 27. (Canceled)
- (Previously Presented) The method of claim 2, wherein at least 90% of the cells 28. are not killed.
- (Previously Presented) The method of claim 2, wherein at least 95% of the cells 29. are not killed.
- (Previously Presented) The method of claim 2, wherein the photosensitizing 30. agent is a sulfonated tetraphenylporphine, a disulfonated aluminum phthalocyanine or a tetrasulfonated aluminum phthalocyanine.

Title: METHOD OF VACCINATION

- 31. (Previously Presented) The method of claim 2, wherein said contacting and said irradiating steps are carried out *ex vivo*.
- 32. (Previously Presented) The method of claim 31, further comprising administering the cells to a mammal after said irradiating step.
- 33. (Canceled)
- 34. (Canceled)
- 35. (Canceled)
- 36. (Canceled)
- 37. (Previously Presented) A method of presenting an antigenic peptide, or part thereof, on the surface of a viable cancer cell, said method comprising:

administering to a patient said antigenic peptide and a photosensitizing agent, wherein said peptide and said agent are each taken up into an intracellular membrane-restricted compartment of said cell;

irradiating said cell with light of a wavelength effective to activate the photosensitizing agent, such that the membrane of said intracellular compartment is disrupted, releasing said peptide into the cytosol of the cell, without killing the cell;

wherein, said released antigenic peptide, or a part thereof, is subsequently presented on the surface of said cell by a class I MHC molecule;

wherein presentation of the peptide, or part thereof, on the surface of said cell can stimulate in the patient cytotoxic T cell mediated cell killing by cytotoxic T cells specific to said antigenic peptide or a part thereof; and

wherein the photosensitizing agent is selected from the group consisting of a porphyrin, phthalocyanine and a chlorin.

38-40. (Canceled)

- (Currently Amended) The method of claim 2, wherein the antigenic peptide 41. stimulates proliferation of cytotoxic T cells.
- (New) The method of claim 2, wherein said method is carried out in vitro. 42.